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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/635,198

08/06/2003

Rolf Harjung

US 20 02 1052-2

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06/06/2006

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EXAMINER

PALADINI, ALBERT WILLIAM

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                |                               |  |
|------------------------------|--------------------------------|-------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/635,198  | Applicant(s)<br>HARJUNG, ROLF |  |
|                              | Examiner<br>Albert W. Paladini | Art Unit<br>2125              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/6/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not describe, explain, or depict the "circuit with one or more circuit devices, wherein each circuit device has a known model for its electrical behavior" recited in claims 1 and 15.

The specification does not describe, explain, or depict "approximating the measured signal response by sections of a curve" recited in claim 1, and the "modeling unit" "adapted for approximating the measured signal response recited in claim 15.

Appropriate correction and clarification are required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

#### **Claim 1**

Line 11 recites, ""approximating the measured signal response by sections of a curve." There are no steps which recite how and where the sections of a curve are generated.

Appropriate correction and clarification are required.

5. Claims 15 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

#### **Claim 15**

Lines 9-10 recite, "wherein the modeling unit is adapted for approximating the measured signal response by sections of a curve." The modeling unit consists of a circuit with one or more circuit devices. The recitation does not explain how a circuit or circuit devices generate sections of a curve.

Appropriate correction and clarification are required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsai (6772400).

This rejection was made to the extent that the claims are understood in view of the 35 USC 112 rejections in paragraphs 1-5, by addressing specific elements recited and honing in on references, which utilize these elements in a logical manner to perform the objective of the claims.

Although specific portions of the references were cited to address the key limitations of the claims, all of the teachings are relevant to the rejection.

From (C17, L57) to (C18, L7), Tsai discloses a method and system for modeling a device by receiving measured electrical behavior in the form of small signal parameter measurements and using physical device models to simulate the I-V's. Physical device models of a device would inherently be circuits. The limitations of approximating the measured signal were not addressed as they were not supported by the specification or clearly recited in the claims as demonstrated in paragraphs 1-5.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashley (6970814) in view of Kondo (6779157).

This rejection was made to the extent that the claims are understood in view of the 35 USC 112 rejections in paragraphs 1-5, by addressing specific elements recited and honing in on references, which utilize these elements in a logical manner to perform the objective of the claims.

Although specific portions of the references were cited to address the key limitations of the claims, all of the teachings are relevant to the rejection.

In (C3, L1-22), Ashley discloses a simulated of a device or integrated circuit using actual circuit elements. Ashley does not disclose the use of measurement data as recited in claims 1, 2, 15 and 16.

In (C1, L50-63), Kondo discloses the use of measurement data in device simulation. It would be obvious to one of ordinary skill in the art to supplement Ashley's disclosure with the teachings of Kondo for the reasons stated by Kondo, which is "An operation to determine parameter values of a circuit element model according to electric characteristics measured on actual semiconductor elements is called 'parameter

extraction.' Currently carrying out parameter extraction is important to provide an accurate circuit element model and secure the reliability of a circuit simulation."

***Relevant Prior Art***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gardner (6458611) discloses a system for measuring one or more circuit elements of an integrated circuit device for characterization where the measurement data culminates in a device model.

Kimmel (6490546) discloses a process for converging on an accurate device model, which consists of a set of circuit elements which simulation the device operation.

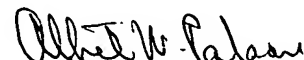
Bodenstab (6856148) discloses a method for evaluating a circuit using a circuit model with a resistor network, and idealized circuit elements or non-linear circuit elements.

10. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

May 19, 2006

  
Albert W. Paladini  
Primary Examiner  
Art Unit 2125